

CONTRACTOR DRAWINGS & INFORMATION SUBMITTAL
EFANENAVFACENGCOM 4335/3 (Rev. 6/80)

Prepare in quintuplicate (original and 4 copies)
CONTROL NO 36

CONTRACT NO N62472-99-D-0032	CONTRACT TASK ORDER NO 0084	ACTIVITY LOCATION Naval Station Newport - Portsmouth, RI
PROJECT TITLE Sand Blast Grit Removal - Derecktor Shipyard		
FROM Tetra Tech EC, Inc.: Program QC Manager Thomas Kelly		DATE June 17, 2005
TO C. Frye (E-Copy and 2 Hard Copies)		DATE June 17, 2005

- 1 THE CONTRACTOR SUBMITTALS LISTED BELOW ARE FORWARDED FOR YOUR REVIEW AND RECOMMENDATIONS
 - (a) APPLY APPROPRIATE STAMP IMPRINT TO EACH SUBMITTAL AND INDICATE REVIEW COMMENTS, AS REQUIRED.
 - (b) RETAIN ONE (1) COPY OF THIS TRANSMITTAL FORM AND RETURN REMAINING COPIES WITH REVIEWED SUBMITTALS TO ROICC.
- 2 THESE SUBMITTALS SHOULD BE RETURNED TO THIS OFFICE BY _____
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E-COPY TO: EFANE: R. Boucher, R. Krivinskas, J. Lambalot
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 USEPA: K. Keckler
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Thomas Kelly JUNE 17, 2005
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COPY TO: ☐ ROICC ☐ DESIGNER

SIGNATURE AND DATE

FROM ROICC	DATE
TO CONTRACTOR	DATE

- 1 THE SUBMITTALS LISTED BELOW HAVE BEEN REVIEWED AND ARE APPROVED/DISAPPROVED AS SHOWN BELOW AND ON EACH STAMP IMPRINT.

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FOR COMMANDING OFFICER, ENGINEERING FIELD DATE
 ACTIVITY NORTHEAST - NAVAL FACILITIES ENGINEERING
 COMMAND

ITEM NO.	SUBMITTAL DESCRIPTION	PREPARED/ SUBMITTED BY	APPROVED	DISAPPROVED	REMARKS
1	SD-18, Records; Final Closeout Report for Sand Blast Grit Removal at Derecktor Shipyard	Thomas Kelly			

U.S. NAVY ENGINEERING FIELD ACTIVITY, NORTHEAST
REMEDIAL ACTION CONTRACT (RAC)
CONTRACT NO. N62472-99-D-0032
CONTRACT TASK ORDER NO. 0084

FINAL CLOSEOUT REPORT
FOR
SAND BLAST GRIT REMOVAL
AT
DERECKTOR SHIPYARD,
NAVAL STATION NEWPORT PORTSMOUTH, RHODE ISLAND

June 17, 2005

Prepared by

Tetra Tech EC, Inc.
133 Federal Street, Floor 6
Boston, Massachusetts 02110



Revision
0

Date
6/17/05

Prepared By
J. McIntosh, EIT

Approved By
S. Leach, P.E.

Pages Affected
All

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ABBREVIATIONS AND ACRONYMS

bgs	below ground surface
COC	contaminants of concern
CTO	Contract Task Order
EFANE	Engineering Field Activity, Northeast
FFA	Federal Facilities Agreement
ft	feet
GPS	Global Positioning System
IRP	Installation Restoration Program
MILCON	Military Construction
NAVSTA	Naval Station
NPL	National Priorities List
PCBs	polychlorinated biphenyls
poly	polyethylene
ppm	parts per million
RAC	Remedial Action Contract
RCRA	Resource Conservation and Recovery Act
RIDEM	Rhode Island Department of Environmental Management
ROICC	Resident Officer in Charge of Construction
SER	Shore Establishment Realignment
SVOCs	semivolatile organic compounds
TCLP	Toxicity Characteristic Leaching Procedure
TPH	total petroleum hydrocarbons
TtEC	Tetra Tech EC, Inc.
USEPA	United States Environmental Protection Agency
VOCs	volatile organic compounds

1.0 INTRODUCTION

Tetra Tech EC, Inc. (TtEC) has prepared this Final Closeout Report for the removal of soil contaminated with sand blast grit from the Naval Station (NAVSTA) Newport in Portsmouth, Rhode Island. TtEC performed the removal on behalf of Engineering Field Activity, Northeast (EFANE) under Remedial Action Contract (RAC) Number N62472-99-D-0032, Contract Task Order (CTO) Number 0084.

2.0 BACKGROUND INFORMATION

2.1 Naval Station

NAVSTA Newport is located approximately 60 miles southwest of Boston, Massachusetts and 25 miles south of Providence, Rhode Island. It occupies approximately 1,063 acres, with portions of the facility located in the city of Newport and towns of Middletown and Portsmouth, Rhode Island. The facility layout is long and narrow, following the western shoreline of Aquidneck Island for nearly 6 miles facing the east passage of Narragansett Bay.

The NAVSTA Newport facility has been in use by the Navy since the Civil War. During both World Wars I and II, military activities at the facility increased significantly and the base provided housing for many service people. In subsequent years, uses of the on-site facilities were slowly phased out until NAVSTA Newport became headquarters of the Commander-Cruiser Destroyer Force Atlantic in 1962. In April 1973, the Shore Establishment Realignment (SER) Program resulted in the reorganization of naval forces, and activity again declined.

The entire NAVSTA Newport facility was listed on the United States Environmental Protection Agency (USEPA) National Priorities List (NPL) of abandoned or uncontrolled hazardous waste sites in November 1989. A Federal Facilities Agreement (FFA) for NAVSTA Newport was signed by the Navy, the State of Rhode Island, and the USEPA on March 23, 1992. The FFA outlines response action requirements under the Department of Defense Installation Restoration Program (IRP) at NAVSTA Newport. The FFA was developed, in part, to ensure that environmental impacts associated with past and present activities at NAVSTA Newport are thoroughly investigated and remediated, as necessary.

2.2 The New North Gate and Security Improvements

During a Military Construction (MILCON) Project entitled The New North Gate and Security Improvements, the MILCON contractor struck soil contaminated with sand blast grit while excavating soil to enable placement of a footing for a newly designed tower. The MILCON contractor notified Mr. John Lambalot, MILCON Resident Officer in Charge of Construction (ROICC), who then notified Mr. Curt Frye, EFANE Remedial Project Manager.

Mr. Frye then contracted TtEC to remove the sand blast grit material. The Navy has assumed that the sand blast grit material was previously used to blast paint from former ships that were docked in the area. The Navy directed TtEC to excavate soil until the lateral excavation limits of 20 feet (ft) x 20-ft were reached. The Navy did not specify to TtEC a vertical excavation limit but directed TtEC to continue with the vertical removal of sand blast grit-contaminated soil until a visual survey of the excavation base indicated that sand blast grit had been removed.

3.0 REMOVAL ACTION

TtEC contacted the MILCON ROICC to obtain the appropriate documentation to confirm that a current approved DigSafe request existed for the area of excavation prior to intrusive activities. TtEC was told that the current NAVSTA approved DigSafe had expired but that NAVSTA Public Works personnel would expedite re-mark-out of the site vicinity to enable TtEC to conduct intrusive activities required to excavate the sand blast grit material.

After NAVSTA Public Works marked out the site and TtEC obtained the NAVSTA approved DigSafe documentation, TtEC mobilized one operator, one field engineer, two 14-ton roll-off containers, and a rubber-tired extendahoe to the site and began removal of soil from an approximate 20-ft x 20-ft x 4.5-ft area. Before excavation began, testpits were excavated adjacent to the north, south, and east sidewalls to determine the extent of contamination and identify if the 20-ft x 20-ft lateral excavation limits were appropriate. The west side of the excavation area was paved so no testpitting was conducted at this location. Sand blast grit was observed in the east sidewall and it was determined that although the lateral limits of excavation (20-ft x 20-ft) would not enable removal of all the sand blast grit material, it would allow the MILCON contractor to complete installation of the footing; therefore, the Navy directed TtEC to initiate the removal action.

Excavated material was loaded directly into two 14-ton lined roll-offs. Care was taken to avoid spillage and any spillage that did occur was immediately cleaned. The removal of the sand blast grit continued until the lateral excavation limits (20-ft x 20-ft) were reached. At a depth of approximately 4.5-ft below ground surface (bgs), the field engineer conducted a visual survey of the excavation base and sidewalls. No odors or staining were observed on the excavation base or sidewalls. No sand blast grit was observed on the excavation base, the north sidewall, the south sidewall, and the west sidewall but sand blast grit was observed embedded in the east sidewall. Because the lateral excavation limits were reached and the excavation base was visually free of sand blast grit, confirmatory soil samples were collected from the base and three sidewalls as shown in Figure 3-1. No confirmatory samples were collected from the east sidewall because sand blast grit was clearly identified in this location. This sidewall was covered with 6-mil polyethylene (poly) sheeting that was weighted down with visually clean fill from the adjacent area. The excavation sidewalls and base were photographed and the excavation limits (four corners) and the confirmatory sample locations were surveyed using a hand-held Trimble Pro XRS Global Positioning System (GPS) field instrument with submeter accuracy. The sample GPS coordinates and site photographs are located in Appendix A.

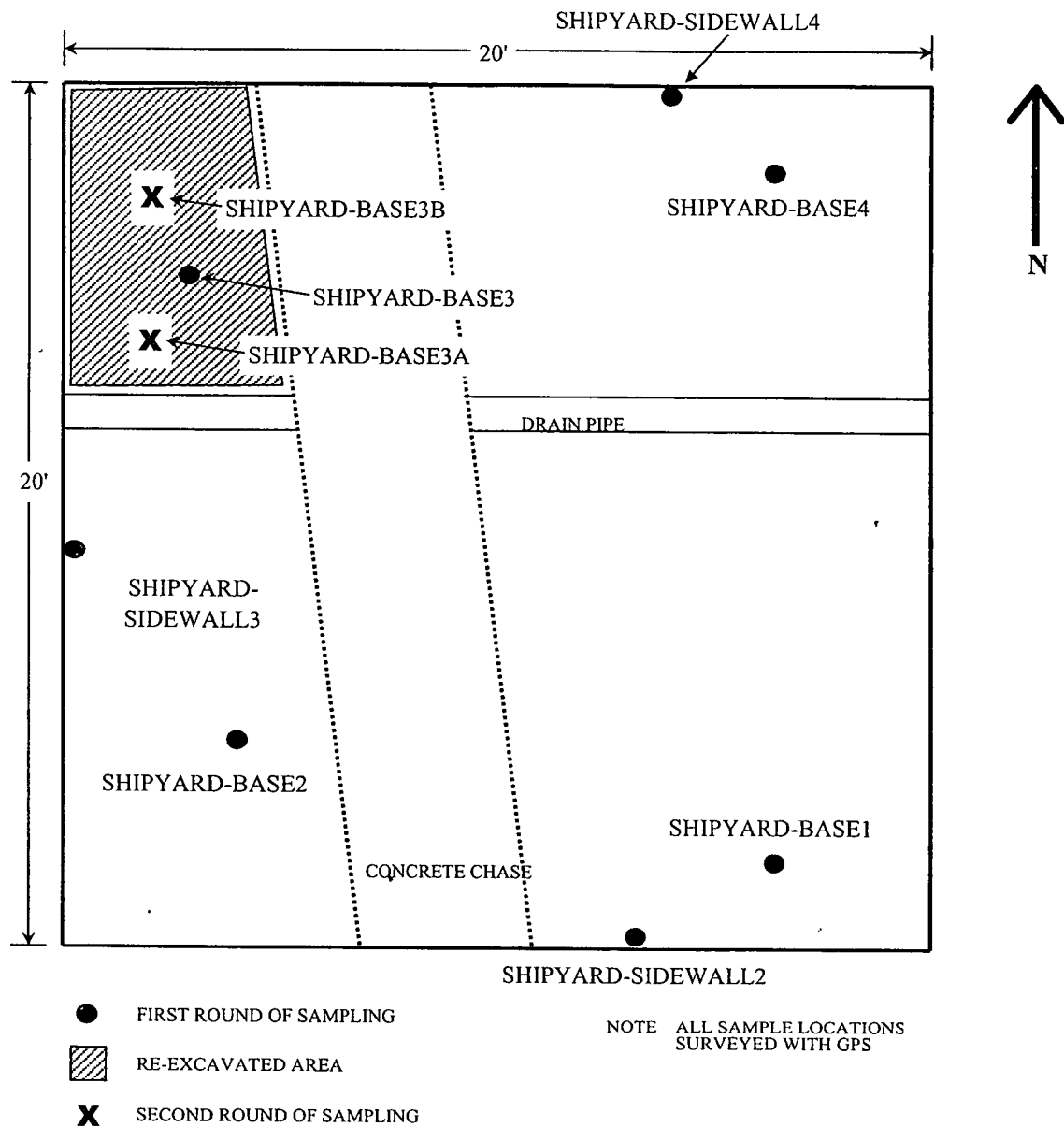


Figure 3-1
GATE 10 MILCON PROJECT
SAND BLAST GRIT REMOVAL
SAMPLE LOCATIONS

4.0 CONFIRMATORY SAMPLING AND ADDITIONAL EXCAVATION

Confirmatory samples (Round 1) were laboratory analyzed for barium, cadmium, chromium, lead, mercury, selenium, silver, zinc, and Polychlorinated Biphenyls (PCBs). These contaminants of concern (COCs) were determined by reviewing historical documentation of a removal action previously conducted at Derecktor Shipyard (*Final Report for Derecktor Shipyard*, OHM Corporation, February 2, 1996). A review of the previous analytical data indicated that low levels of Total Petroleum Hydrocarbons (TPH) (#2 fuel oil) and metals were detected. PCBs were included as a COC because of their historical popularity as a paint ingredient.

The results of the first round of confirmatory samples are included in Appendix B. As shown, sample SHIPYARD-BASE3 contained a lead concentration of 434 parts per million (ppm), which exceeded the Rhode Island Department of Environmental Management (RIDEM) Residential Direct Exposure Criteria of 150 ppm. Therefore, an additional 2-ft of soil were removed from this area, as shown in Figure 3-1. After the additional soil removal, a second round of confirmatory samples (SHIPYARD-BASE3A and SHIPYARD-BASE3B) were collected. As shown in Appendix B, SHIPYARD-BASE3A and SHIPYARD-BASE3B samples did not exceed the RIDEM criteria. The poly sheeting was left in place to demarcate the clean area from the eastern sidewall that was visually observed to contain sand blast grit. As directed by the Navy, TtEC did not backfill the excavation because the Navy anticipated that the MILCON contractor would resume intrusive activities in this area upon TtEC's departure.

5.0 WASTE CHARACTERIZATION AND DISPOSAL

Two 14-ton roll-offs were used to containerize the waste. A 3-point composite sample (SHIPYARDWASTECHAR) was collected from both roll-offs and composited into one sample, which was analyzed for the following COCs:

- TPH
- Volatile Organic Compounds (VOCs)
- Semi-Volatile Organic Compounds (SVOCs)
- PCBs
- Resource Conservation and Recovery Act (RCRA) Metals
- pH
- Ignitability
- Corrosivity
- Reactivity

The waste characterization data is included in Appendix B. Due to the concentrations of lead, chromium, and barium present in the waste characterization sample, the disposal facility requested an additional composite sample be collected and analyzed for Toxicity Characteristic Leaching Procedure (TCLP) lead, TCLP chromium, and TCLP barium. TtEC collected the additional sample (SHIPYARDWASTECHAR1) and the results, which are included in Appendix B, were acceptable to the disposal facility.

From February 15-16, 2005, the material was shipped to Aggregate Recycling Corporation in Eliot, Maine. The bills of lading and weight tickets are included in Appendix C.

6.0 DECONTAMINATION

All tools and heavy equipment that came into contact with the sand blast grit material was dry-brush decontaminated directly over the roll-off container prior to demobilization from the site.

Appendix A

Sample GPS Coordinates and Site Photographs

Sample Identification Number	GPS COORDINATES		
	Easting*	Northing*	Elevation
SHIPYARD-SIDEWALL2	551667.5	161469.2	18.647
SHIPYARD-SIDEWALL3	551653.1	161476.7	18.979
SHIPYARD-SIDEWALL4	551664.8	161488.6	21.383
SHIPYARD-BASE1	551669.9	161474	17.034
SHIPYARD-BASE2	551657.7	161474.6	19.319
SHIPYARD-BASE3	551654.8	161481.1	21.724
SHIPYARD-BASE4	551669.3	161482	24.412
SHIPYARD-BASE3A	551653.3	161481.9	17.649
SHIPYARD-BASE3B	551654.2	161484.7	20.103
EXCAVATION SE CORNER	551671.9	161470.1	23.398
EXCAVATION NE CORNER	551669.8	161491.5	19.764
EXCAVATION NW CORNER	551650.1	161488.1	21.412
EXCAVATION SW CORNER	551652.7	161466.9	19.88

*Coordinates are shown in NAD 27 - RI State Plane 3800, Feet.



DATE: 12/22/04 TIME: 0826 LOCATION: SAND BLAST GRIT AREA
COMMENT: WORK AREA PREPARATION



DATE: 12/22/04 TIME: 0826 LOCATION: SAND BLAST GRIT AREA
COMMENT: WORK AREA PREPARATION



DATE: 12/22/04 TIME: 0826 LOCATION: SAND BLAST GRIT AREA
COMMENT: WORK AREA PREPARATION



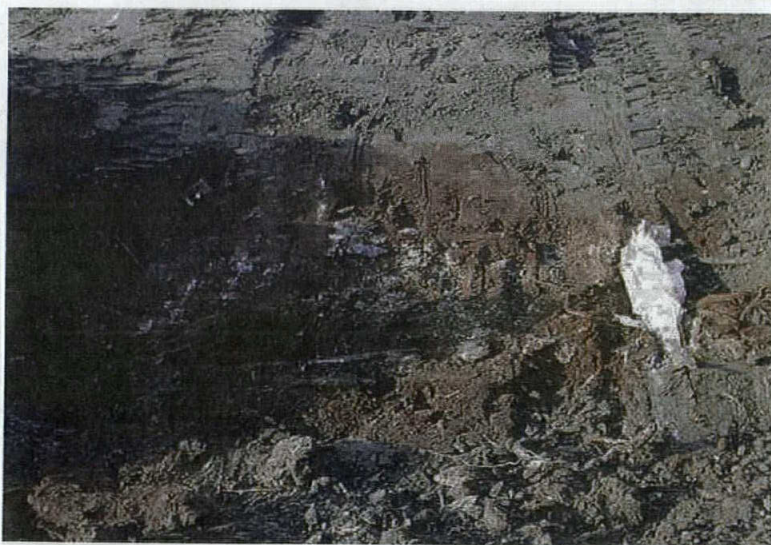
DATE: 12/22/04 TIME: 0826 LOCATION: SAND BLAST GRIT AREA
COMMENT: FILL MATERIAL OUTSIDE WORK AREA (FIRE POSITION STAKE)



DATE: 12/22/04 TIME: 0935 LOCATION: SAND BLAST GRIT AREA
COMMENT: SAND BLAST GRIT REMOVAL



DATE: 12/22/04 TIME: 0936 LOCATION: SAND BLAST GRIT AREA
COMMENT: SAND BLAST GRIT REMOVAL



DATE: 12/22/04 TIME: 0939 LOCATION: SAND BLAST GRIT AREA
COMMENT: SAND BLAST GRIT REMOVAL



DATE: 12/22/04 TIME: 0946 LOCATION: SAND BLAST GRIT AREA
COMMENT: SAND BLAST GRIT REMOVAL



DATE: 12/22/04 TIME: 1125 LOCATION: SAND BLAST GRIT AREA
COMMENT: SAND BLAST GRIT REMOVAL



DATE: 12/22/04 TIME: 1133 LOCATION: SAND BLAST GRIT AREA
COMMENT: SAND BLAST GRIT REMOVAL



DATE: 12/22/04 TIME: 1234 LOCATION: SAND BLAST GRIT AREA
COMMENT: SAND BLAST GRIT REMOVAL



DATE: 12/22/04 TIME: 1247 LOCATION: SAND BLAST GRIT AREA
COMMENT: SAND BLAST GRIT REMOVAL



DATE: 12/22/04 TIME: 1302 LOCATION: SAND BLAST GRIT AREA
COMMENT: EAST SIDEWALL SAMPLE LOCATION SW1



DATE: 12/22/04 TIME: 1328 LOCATION: SAND BLAST GRIT AREA
COMMENT: POTENTIAL DRAINAGE PIPE ENTERING EXCAVATION



DATE: 12/22/04 TIME: 1331 LOCATION: SAND BLAST GRIT AREA
COMMENT: POLYETHYLENE SHEETING ON EAST SIDEWALL



DATE: 12/22/04 TIME: 1511 LOCATION: SAND BLAST GRIT AREA
COMMENT: 16" METAL PIPE ENTERING CONCRETE CHAMBER W/ PIPE



DATE: 12/22/04 TIME: 1512 LOCATION: SAND BLAST GRIT AREA
COMMENT: 8" CLAY PIPE ENTERING EXCAVATION AREA (SOUTH SIDE)



DATE: 12/22/04 TIME: 1513 LOCATION: SAND BLAST GRIT AREA
COMMENT: NORTH SIDEWALL



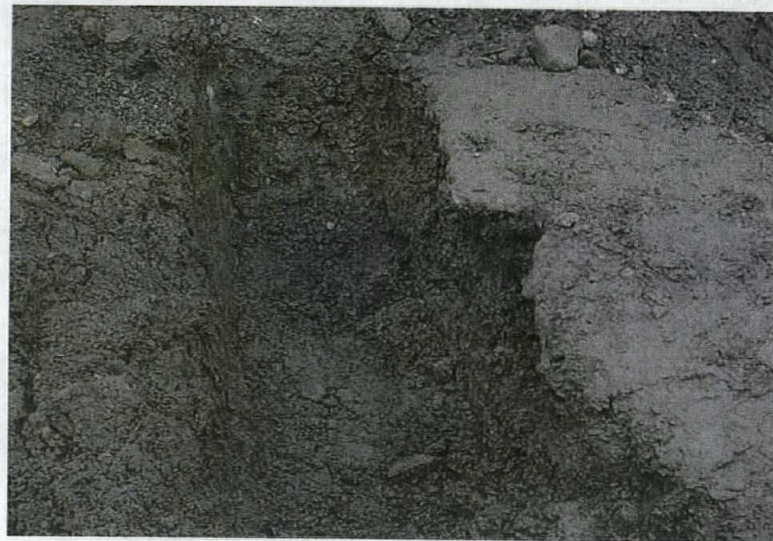
DATE: 12/22/04 TIME: 1515 LOCATION: SAND BLAST GRIT AREA
COMMENT: CONCRETE CHASE



DATE: 01/13/05 TIME: 0844 LOCATION: SAND BLAST GRIT AREA
COMMENT: PRE-EXISTING AREA AT BASE #3 SAMPLE LOCATION



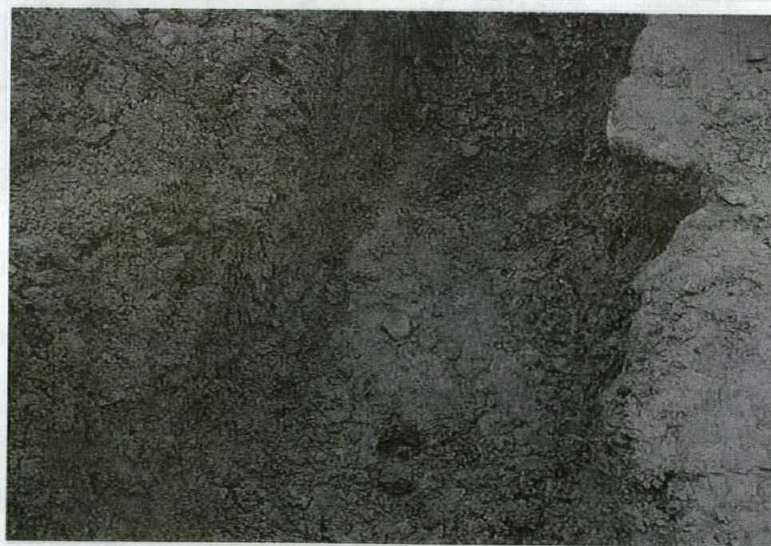
DATE: 01/13/05 TIME: 1018 LOCATION: SAND BLAST GRIT AREA
COMMENT: EXCAVATION AT BASE #3 SAMPLE LOCATION



DATE: 01/13/05 TIME: 1150 LOCATION: SAND BLAST GRIT AREA
COMMENT: EXCAVATION AT BASE #3 SAMPLE LOCATION



DATE: 01/13/05 TIME: 1150 LOCATION: SAND BLAST GRIT AREA
COMMENT: EXCAVATION AT BASE #3 SAMPLE LOCATION



DATE: 01/13/05 TIME: 1219 LOCATION: SAND BLAST GRIT AREA
COMMENT: SAMPLE LOCATION L-SHIPYARD-BASE 3A & 3B

Appendix B

**Confirmatory Sample Screening Against RIDEM Residential Criteria
and Analytical Data (including waste characterization)**

Confirmatory Sample Screening Against RIDEM Residential Criteria and Analytical Data
Newport Shipyard
Confirmatory Sample PCB Data
(Round 1)

SAMP_ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
SHIPYARD-SIDEWALL2	Soil	Total PCBs	U	0.017	10	N	N	12/28/2004	EPA 8082	53315-2	1336-36-3
SHIPYARD-SIDEWALL3	Soil	Total PCBs		0.05	10	N	N	12/28/2004	EPA 8082	53315-3RX	1336-36-3
SHIPYARD-SIDEWALL4	Soil	Total PCBs	U	0.017	10	N	N	12/28/2004	EPA 8082	53315-4	1336-36-3
SHIPYARD-BASE1	Soil	Total PCBs		0.05	10	N	N	12/28/2004	EPA 8082	53315-5	1336-36-3
SHIPYARD-BASE2	Soil	Total PCBs		0.034	10	N	N	12/28/2004	EPA 8082	53315-6	1336-36-3
SHIPYARD-BASE3	Soil	Total PCBs		0.266	10	N	N	12/28/2004	EPA 8082	53315-7	1336-36-3
SHIPYARD-BASE4	Soil	Total PCBs	U	0.018	10	N	N	12/28/2004	EPA 8082	53315-8	1336-36-3

**Confirmatory Sample Screening Against RIDEM Residential Criteria and Analytical Data
Newport Shipyard Confirmatory Sample
RCRA 8 Metal Data
(Round 1)**

SAMP_ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Lab ID#	CAS NOS
SHIPYARD-SIDEWALL2	Soil	Barium		33.4	5500	N	N	603356	7440-39-3
		Cadmium	B	0.23	39	N	N		7440-43-9
		Chromium		15.9	390	N	N		7440-47-3
		Lead		15.5	150	N	N		7439-92-1
		Mercury	U	0.015	23	N	N		7439-97-6
		Selenium	B	0.39	390	N	N		7782-49-2
		Silver	U	0.22	200	N	N		7440-22-4
		Zinc		64.7	6000	N	N		7440-66-6
SHIPYARD-SIDEWALL3	Soil	Barium		33.5	5500	N	N	603357	7440-39-3
		Cadmium	B	0.25	39	N	N		7440-43-9
		Chromium		16.6	390	N	N		7440-47-3
		Lead		42.9	150	N	N		7439-92-1
		Mercury	B	0.03	23	N	N		7439-97-6
		Selenium	B	0.33	390	N	N		7782-49-2
		Silver	U	0.19	200	N	N		7440-22-4
		Zinc		106	6000	N	N		7440-66-6
SHIPYARD-SIDEWALL4	Soil	Barium		22.9	5500	N	N	603358	7440-39-3
		Cadmium	B	0.15	39	N	N		7440-43-9
		Chromium		17.1	390	N	N		7440-47-3
		Lead		19.4	150	N	N		7439-92-1
		Mercury	B	0.016	23	N	N		7439-97-6
		Selenium		0.57	390	N	N		7782-49-2
		Silver	U	0.2	200	N	N		7440-22-4
		Zinc		61.4	6000	N	N		7440-66-6
SHIPYARD-BASE1	Soil	Barium		22.5	5500	N	N	603359	7440-39-3
		Cadmium	B	0.3	39	N	N		7440-43-9
		Chromium		16.4	390	N	N		7440-47-3
		Lead		38.7	150	N	N		7439-92-1
		Mercury		0.033	23	N	N		7439-97-6
		Selenium	B	0.3	390	N	N		7782-49-2
		Silver	U	0.2	200	N	N		7440-22-4
		Zinc		93.8	6000	N	N		7440-66-6
SHIPYARD-BASE2	Soil	Barium		45.2	5500	N	N	603360	7440-39-3
		Cadmium	B	0.36	39	N	N		7440-43-9
		Chromium		21.7	390	N	N		7440-47-3
		Lead		77.9	150	N	N		7439-92-1
		Mercury	B	0.029	23	N	N		7439-97-6
		Selenium		1.1	390	N	N		7782-49-2
		Silver	U	0.19	200	N	N		7440-22-4
		Zinc		176	6000	N	N		7440-66-6
SHIPYARD-BASE3	Soil	Barium		30.8	5500	N	N	603361	7440-39-3
		Cadmium	B	0.5	39	N	N		7440-43-9
		Chromium		16	390	N	N		7440-47-3
		Lead		434	150	N	N		7439-92-1
		Mercury		0.15	23	N	N		7439-97-6
		Selenium	U	0.3	390	N	N		7782-49-2
		Silver	B	0.25	200	N	N		7440-22-4
		Zinc		208	6000	N	N		7440-66-6
SHIPYARD-BASE4	Soil	Barium		23.2	5500	N	N	603362	7440-39-3
		Cadmium	B	0.12	39	N	N		7440-43-9
		Chromium		13.8	390	N	N		7440-47-3
		Lead		14.3	150	N	N		7439-92-1
		Mercury	U	0.017	23	N	N		7439-97-6
		Selenium	U	0.3	390	N	N		7782-49-2
		Silver	U	0.2	200	N	N		7440-22-4
		Zinc		77.8	6000	N	N		7440-66-6

Confirmatory Sample Screening Against RIDEM Residential Criteria and Analytical Data
Shipyards Base Confirmatory Sample Lead Data
Collected After
Re-excavation
(Round 2)

SAMP ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-SHIPYARD-BASE3A	Soil	Lead	E	23.2	150	N	N		SW6010B	604984	7439-92-1
L-SHIPYARD-BASE3B	Soil	Lead	E	8.2	150	N	N		SW6010B	604985	7439-92-1



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Ms. Janice McIntosh
Tetra Tech FW, Inc.
133 Federal Street 6th Floor
Boston MA 02110

Report Number: 53315

Revision: Rev. 0

Re: NAVSTA-Sand Blast Grit Removal

CTO 0084

Enclosed are the results of the analyses on your sample(s). Samples were received on 24 December 2004 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

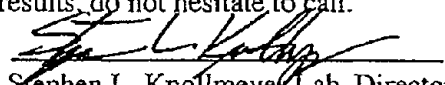
<u>Lab Number</u>	<u>Sample Date</u>	<u>Station Location</u>	<u>Analysis</u>	<u>Comments</u>
53315-1	12/22/04	SHIPYARD-WASTECHAR	Cyanide Reactivity	
	12/22/04	SHIPYARD-WASTECHAR	EPA 1010 Flashpoint	
	12/22/04	SHIPYARD-WASTECHAR	EPA 8015 - TPH	
	12/22/04	SHIPYARD-WASTECHAR	EPA 8082 (PCBs only)	
	12/22/04	SHIPYARD-WASTECHAR	EPA 8260 Volatile Organics	
	12/22/04	SHIPYARD-WASTECHAR	EPA 8270 Acid/Base Neutrals	
	12/22/04	SHIPYARD-WASTECHAR	RCRA Metals	
	12/22/04	SHIPYARD-WASTECHAR	Sulfide Reactivity	
	12/22/04	SHIPYARD-WASTECHAR	SW-846 9045 pH in Solid	
53315-2	12/22/04	SHIPYARD-SIDEWALL2	EPA 8082 (PCBs only)	
	12/22/04	SHIPYARD-SIDEWALL2	RCRA Metals	
53315-3	12/22/04	SHIPYARD-SIDEWALL3	EPA 8082 (PCBs only)	
	12/22/04	SHIPYARD-SIDEWALL3	RCRA Metals	
53315-4	12/22/04	SHIPYARD-SIDEWALL 4	EPA 8082 (PCBs only)	
	12/22/04	SHIPYARD-SIDEWALL 4	RCRA Metals	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature


Stephen L. Knollmeyer Lab. Director

Date

12/30/2004

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800-929-9906
www.analyticslab.com

Ms. Janice McIntosh
Tetra Tech FW, Inc.
133 Federal Street 6th Floor
Boston MA 02110

Report Number: 53315

Revision: Rev. 0

Re: NAVSTA-Sand Blast Grit Removal

CTO 0084

Enclosed are the results of the analyses on your sample(s). Samples were received on 24 December 2004 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

<u>Lab Number</u>	<u>Sample Date</u>	<u>Station Location</u>	<u>Analysis</u>	<u>Comments</u>
53315-5	12/22/04	SHIPYARD-BASE1	EPA 8082 (PCBs only)	
	12/22/04	SHIPYARD-BASE1	RCRA Metals	
53315-6	12/22/04	SHIPYARD-BASE2	EPA 8082 (PCBs only)	
	12/22/04	SHIPYARD-BASE2	RCRA Metals	
53315-7	12/22/04	SHIPYARD-BASE3	EPA 8082 (PCBs only)	
	12/22/04	SHIPYARD-BASE3	RCRA Metals	
53315-8	12/22/04	SHIPYARD-BASE4	EPA 8082 (PCBs only)	
	12/22/04	SHIPYARD-BASE4	RCRA Metals	
53315-9	12/22/04	Trip Blank	Electronic Data Deliverable	
	12/22/04	Trip Blank	EPA 8260 Volatile Organics	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature


Stephen L. Knollmeyer Lab. Director

Date

12/30/2004

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Ms. Janice McIntosh
Tetra Tech FW, Inc.
133 Federal Street 6th Floor
Boston MA 02110

December 30, 2004

SAMPLE DATA

CLIENT SAMPLE ID

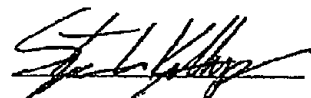
Project Name: NAVSTA-Sand Blast Grit Removal
Project Number:
Field Sample ID: SHIPYARD-WASTECHAR

Lab Sample ID: 53315-1
Matrix: Solid
Percent Solid: 89
Dilution Factor: 1.1
Collection Date: 12/22/04
Lab Receipt Date: 12/24/04
Extraction Date: 12/28/04
Analysis Date: 12/28/04

TOTAL PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results µg/kg
Total PCBs	17	159
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	50	%
Decachlorobiphenyl	53	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

COMMENTS: Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.
Results are expressed on a dry weight basis.



Ms. Janice McIntosh
Tetra Tech F.W., Inc.
133 Federal Street 6th Floor
Boston MA 02110

January 4, 2005

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NAVSTA-Sand Blast Grit Removal
Project Number: CTO 0084
Field Sample ID: SHIPYARD-WASTECHAR

Lab Sample ID: 53315-1
Matrix: Solid
Percent Solid: 89
Dilution Factor: 1.1
Collection Date: 12/22/04
Lab Receipt Date: 12/24/04
Extraction Date: 12/28/04
Analysis Date: 12/29/04

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS					
COMPOUND	Quantitation Limit µg/kg	Result µg/kg	COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Accenaphthene	280	U	2,4-dinitrophenol	280	U
Acenaphthylene	280	U	2,4-Dinitrotoluene	280	U
Anthracene	280	U	Fluoranthene	280	513
Benzo[a]anthracene	280	262 J	Fluorene	280	U
Benzo[a] pyrene	280	290	Hexachlorobenzene	280	U
Benzo[b] fluoranthene	280	292	Hexachlorobutadiene	280	U
Benzo(g,h,i) perylene	280	165 J	Hexachloroethane	280	U
Benzo[k] fluoranthene	280	276 J	Indeno [1,2,3-cd] pyrene	280	228 J
1,1-Biphenyl	280	U	2-Methylnaphthalene	280	U
Bis (2-ethylhexyl) phthalate	280	1670	Naphthalene	280	U
bis(2-chloroethyl) ether	280	U	Pentachlorophenol	280	U
bis(2-chloroisopropyl)ether	280	U	Phenanthrene	280	367
4-Chloroaniline	280	U	Phenol	280	U
2-Chlorophenol	280	U	Pyrene	280	469
Chrysene	280	300	1,2,4-Trichlorobenzene	280	U
Dibenz [a,h] anthracene	280	U	2,4,5-Trichlorophenol	280	U
1,2-Dichlorobenzene	280	U	2,4,6-Trichlorophenol	280	U
1,3-Dichlorobenzene	280	U			
1,4-Dichlorobenzene	280	U			
3,3'-Dichlorobenzidine	280	U			
2,4-Dichlorophenol	280	U			
Diethyl Phthalate	280	U			
2,4-Dimethylphenol	280	U			
Dimethyl Phthalate	280	U			
Surrogate Standard Recovery					
2-Fluorophenol	63 %	d5-Phenol	76 %	d5-nitrobenzene	69 %
2-Fluorobiphenyl	73 %	2,4,6-Tribromophenol	81 %	d14-p-terphenyl	78 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

COMMENTS: Results are expressed on a dry weight basis. Sample did not meet method acceptance criteria for several compounds in the MS/MSD. The laboratory control spike was in control.

Ms. Janice McIntosh
Tetra Tech FW, Inc.
133 Federal Street 6th Floor
Boston MA 02110

January 4, 2005
SAMPLE DATA

CLIENT SAMPLE ID
Project Name: NAVSTA-Sand Blast Grit
Removal
Project Number:
Field Sample ID: SHIPYARD-WASTECHAR

Lab Sample ID: 53315-1
Matrix: Solid
Percent Solid: 89
Dilution Factor: 5.4
Collection Date: 12/22/04
Lab Receipt Date: 12/24/04
Extraction Date: 12/27/04
Analysis Date: 12/29/04

ANALYTICAL RESULTS		
TOTAL PETROLEUM HYDROCARBONS (C10-C36)		
Result	Units	Quantitation Limit
846	mg/kg	108
Surrogate Standard Recovery		
m-Terphenyl	110	%
U=Undetected I=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Aqueous samples prepared by Separatory Funnel Liquid/Liquid Extraction, "Test Methods for Evaluating Solid Waste," Method 3510C; other matrices prepared by Pressurized Fluid Extraction, "Test Methods for Evaluating Solid Waste," Method 3545.

All matrices analyzed according to "Test Methods for Evaluating Solid Waste, SW-846 Method 8015"

COMMENTS: Results are expressed on a dry weight basis. Quantitation performed based on a No. 6 Fuel Oil standard.

8100C36

Authorized signature

Melissa Wall



environmental
laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9936

Ms. Janice McIntosh
Tetra Tech FW, Inc.
133 Federal Street 6th Floor
Boston MA 02110

January 4, 2005

CLIENT SAMPLE ID

Project Name: NAVSTA-Sand Blast Grit
Project Number:
Client Sample ID: SHIPYARD-
WASTECHAR

SAMPLE DATA

Lab Sample ID: 53315-1
Matrix: Solid
Percent Solid 89%
Collection Date: 12/22/04 16:00
Lab Receipt Date: 12/24/04

Parameter	Result	Date Analyzed	Detection Limit	Units
pH	7.0	12/28/04 9:01	NA	pH units
Flashpoint	>165	12/28/04	NA	° Fahrenheit
Sulfide Reactivity	U	12/27/04	11	mg/kg
Cyanide Reactivity	U	12/27/04	11	mg/kg
U = Undetected NA = Not Applicable <=Less than >=Greater than				

METHODOLOGY: pH: Sample analyzed according to "EPA SW 846 Method 9045 pH in solid"
FlashPoint: Sample analysis was conducted according to "Test Methods for Evaluating Solid Waste, EPA SW-846, Method 1010."
Reactivity: Sulfide reactivity analysis was conducted according to "Test Methods for Evaluating Solid Waste, SW-846, Sulfide by Modified Method 7.3.4.2."
Cyanide reactivity analysis was conducted according to "Test Methods for Evaluating Solid Waste, SW-846, Cyanide by Modified Method 7.3.3.2."

COMMENTS: Results are expressed on a dry weight basis. Cyanide analysis conducted on 12/28/04.

Authorized signature

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SHIPYARD-WASTE CHAR

Lab Name: STL BURLINGTONContract: 24000Lab Code: STLVTCase No.: 24000

SAS No.: _____

SDG No.: 53315AMatrix (soil/water): SOILLab Sample ID: 603355Level (low/med): LOWDate Received: 12/29/04% Solids: 91.0Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.5			P
7440-39-3	Barium	426			P
7440-43-9	Cadmium	0.88			P
7440-47-3	Chromium	90.5			P
7439-92-1	Lead	374			P
7439-97-6	Mercury	0.20			CV
7782-49-2	Selenium	0.30	U		P
7440-22-4	Silver	0.61	B		P

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: yellowClarity After: cloudy

Artifacts: _____

Comments: _____

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ANAEV SAMPLE NO.

SHIPYARD-
WASTE CHAR

Lab Name: STL BURLINGTON

Contract: 24000

Lab Code: STLVT

Case No.: 24000

SAS No.:

SDG No.: 53315A

Matrix: (soil/water) SOIL

Lab Sample ID: 603355

Sample wt/vol: 10.8 (g/mL) G

Lab File ID: 603355

Level: (low/med) LOW

Date Received: 12/29/04

% Moisture: not dec. 9

Date Analyzed: 12/30/04

GC Column: CAP ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Q

67-64-1-----	Acetone	43	B
71-43-2-----	Benzene	2.5	U
75-27-4-----	Bromodichloromethane	2.5	U
75-25-2-----	Bromoform	2.5	U
74-83-9-----	Bromomethane	1.3	J
56-23-5-----	Carbon Tetrachloride	2.5	U
108-90-7-----	Chlorobenzene	2.5	U
67-66-3-----	Chloroform	2.5	U
124-48-1-----	Dibromochloromethane	2.5	U
96-12-8-----	1,2-Dibromo-3-Chloropropane	2.5	U
75-34-3-----	1,1-Dichloroethane	2.5	U
75-35-4-----	1,1-Dichloroethene	2.5	U
107-06-2-----	1,2-Dichloroethane	2.5	U
156-59-2-----	cis-1,2-Dichloroethene	2.5	U
156-60-5-----	trans-1,2-Dichloroethene	2.5	U
78-87-5-----	1,2-Dichloropropane	2.5	U
100-41-4-----	Ethylbenzene	2.5	U
106-93-4-----	1,2-Dibromoethane	2.5	U
98-82-8-----	Isopropylbenzene	2.5	U
78-93-3-----	2-Butanone	9.5	
108-10-1-----	4-Methyl-2-pentanone	0.46	J
1634-04-4-----	Methyl-t-Butyl Ether	2.5	U
75-09-2-----	Methylene Chloride	2.5	U
100-42-5-----	Styrene	2.5	U
630-20-6-----	1,1,1,2-Tetrachloroethane	2.5	U
79-34-5-----	1,1,2,2-Tetrachloroethane	2.5	U
127-18-4-----	Tetrachloroethene	2.5	U
108-88-3-----	Toluene	1.0	J
71-55-6-----	1,1,1-Trichloroethane	2.5	U
79-00-5-----	1,1,2-Trichloroethane	2.5	U
79-01-6-----	Trichloroethene	2.5	U
75-01-4-----	Vinyl Chloride	2.5	U
1330-20-7-----	Xylene (total)	0.81	J

FORM I VOA

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SHIPYARD BASE 1

Lab Name: STL BURLINGTONContract: 24000Lab Code: STLVTCase No.: 24000

SAS No.: _____

SDG No.: 53315Matrix (soil/water): SOILLab Sample ID: 603359Level (low/med): LOWDate Received: 12/29/04% Solids: 86.4Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	22.5			P
7440-43-9	Cadmium	0.30	B		P
7440-47-3	Chromium	16.4			P
7439-92-1	Lead	38.7			P
7439-97-6	Mercury	0.033			CV
7782-49-2	Selenium	0.30	B		P
7440-22-4	Silver	0.20	U		P
7440-66-6	Zinc	93.8			P

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: yellowClarity After: cloudy

Artifacts: _____

Comments: _____

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SHIPYARD BASE 2

Lab Name: STL BURLINGTON Contract: 24000
Lab Code: STLVT Case No.: 24000 SAS No.: _____ SDG No.: 53315
Matrix (soil/water): SOIL Lab Sample ID: 603360
Level (low/med): LOW Date Received: 12/29/04
% Solids: 90.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	45.2			P
7440-43-9	Cadmium	0.36	B		P
7440-47-3	Chromium	21.7			P
7439-92-1	Lead	77.9			P
7439-97-6	Mercury	0.029	B		CV
7782-49-2	Selenium	1.1			P
7440-22-4	Silver	0.19	U		P
7440-66-6	Zinc	176			P

Color Before: brown Clarity Before: _____ Texture: medium
Color After: yellow Clarity After: cloudy Artifacts: _____
Comments: _____

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SHIPYARD BASE 3

Lab Name: STL BURLINGTONContract: 24000Lab Code: STLVTCase No.: 24000

SAS No.: _____

SDG No.: 53315Matrix (soil/water): SOILLab Sample ID: 603361Level (low/med): LOWDate Received: 12/29/04% Solids: 89.0

Concentration Units (ug/L or mg/kg dry weight):

MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	30.8			P
7440-43-9	Cadmium	0.50	B		P
7440-47-3	Chromium	16.0			P
7439-92-1	Lead	434			P
7439-97-6	Mercury	0.15			CV
7782-49-2	Selenium	0.30	U		P
7440-22-4	Silver	0.25	B		P
7440-66-6	Zinc	208			P

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: yellowClarity After: cloudy

Artifacts: _____

Comments: _____

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

RPA SAMPLE NO.

SHIPYARD BASE 4

Lab Name: STL BURLINGTON Contract: 24000
Lab Code: STLVT Case No.: 24000 SAS No.: _____ SDG No.: 53315
Matrix (soil/water): SOIL Lab Sample ID: 603362
Level (low/med): LOW Date Received: 12/29/04
% Solids: 87.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	23.2			P
7440-43-9	Cadmium	0.12	B		P
7440-47-3	Chromium	13.8			P
7439-92-1	Lead	14.3			P
7439-97-6	Mercury	0.017	U		CV
7782-49-2	Selenium	0.30	U		P
7440-22-4	Silver	0.20	U		P
7440-66-6	Zinc	77.8			P

Color Before: brown Clarity Before: _____ Texture: medium
Color After: yellow Clarity After: cloudy Artifacts: _____

Comments: _____

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SHIPYARDSIDEWALL 2

Lab Name: STL BURLINGTON Contract: 24000
Lab Code: STLVT Case No.: 24000 SAS No.: _____ SDG No.: 53315
Matrix (soil/water): SOIL Lab Sample ID: 603356
Level (low/med): LOW Date Received: 12/29/04
% Solids: 89.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	33.4			P
7440-43-9	Cadmium	0.23	B		P
7440-47-3	Chromium	15.9			P
7439-92-1	Lead	15.5			P
7439-97-6	Mercury	0.015	U		CV
7782-49-2	Selenium	0.39	B		P
7440-22-4	Silver	0.22	U		P
7440-66-6	Zinc	64.7			P

Color Before: brown Clarity Before: _____ Texture: medium
Color After: yellow Clarity After: cloudy Artifacts: _____
Comments: _____

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SHIPYARD-SIDEWALL 3

Lab Name: STL BURLINGTONContract: 24000Lab Code: STLVTCase No.: 24000

SAS No.: _____

SDG No.: 53315Matrix (soil/water): SOILLab Sample ID: 603357Level (low/med): LOWDate Received: 12/29/04% Solids: 90.9Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	33.5			P
7440-43-9	Cadmium	0.25	B		P
7440-47-3	Chromium	16.6			P
7439-92-1	Lead	42.9			P
7439-97-6	Mercury	0.030	B		CV
7782-49-2	Selenium	0.33	B		P
7440-22-4	Silver	0.19	U		P
7440-66-6	Zinc	106			P

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: yellowClarity After: cloudy

Artifacts: _____

Comments: _____

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SHIPYARD-SIDEWALL 4

Lab Name: STL BURLINGTONContract: 24000Lab Code: STLVTCase No.: 24000

SAS No.: _____

SDG No.: 53315Matrix (soil/water): SOILLab Sample ID: 603358Level (low/med): LOWDate Received: 12/29/04% Solids: 86.9Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	22.9			P
7440-43-9	Cadmium	0.15	B		P
7440-47-3	Chromium	17.1			P
7439-92-1	Lead	19.4			P
7439-97-6	Mercury	0.016	U		CV
7782-49-2	Selenium	0.57			P
7440-22-4	Silver	0.20	U		P
7440-66-6	Zinc	61.4			P

Color Before: brown

Clarity Before: _____

Texture: mediumColor After: yellowClarity After: cloudy

Artifacts: _____

Comments: _____

Ms. Janice McIntosh
Terra Tech FW, Inc.
133 Federal Street 6th Floor
Boston MA 02110

December 30, 2004

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NAVSTA-Sand Blast Grit Removal

Project Number:

Field Sample ID: SHIPYARD-SIDEWALL2

Lab Sample ID: 53315-2
Matrix: Solid
Percent Solid: 89
Dilution Factor: 1.1
Collection Date: 12/22/04
Lab Receipt Date: 12/24/04
Extraction Date: 12/28/04
Analysis Date: 12/28/04

TOTAL PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results µg/kg
Total PCBs	17	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	56 %	
Decachlorobiphenyl	54 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.

COMMENTS: Results are expressed on a dry weight basis.

Ms. Janice McIntosh
Tetra Tech FW, Inc
133 Federal Street 6th Floor
Boston MA 02110

December 30, 2004

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NAVSTA-Sand Blast Grit Removal

Project Number:

Field Sample ID: SHIPYARD-SIDEWALL3

Lab Sample ID: 53315-3 RX
Matrix: Solid
Percent Solid: 91
Dilution Factor: 1.1
Collection Date: 12/22/04
Lab Receipt Date: 12/24/04
Extraction Date: 12/28/04
Analysis Date: 12/29/04

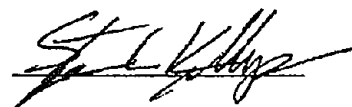
TOTAL PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
Total PCBs	17	50
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	91 %	
Decachlorobiphenyl	92 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.

COMMENTS: Results are expressed on a dry weight basis.



Ms. Janice McIntosh
Tetra Tech FW, Inc.
133 Federal Street 6th Floor
Boston MA 02110

December 30, 2004

SAMPLE DATA

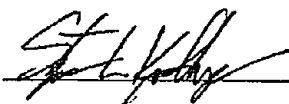
CLIENT SAMPLE ID
Project Name: NAVSTA-Sand Blast Grit Removal
Project Number:
Field Sample ID: SHIPYARD-SIDEWALL 4

Lab Sample ID: 53315-4
Matrix: Solid
Percent Solid: 87
Dilution Factor: 1.1
Collection Date: 12/22/04
Lab Receipt Date: 12/24/04
Extraction Date: 12/28/04
Analysis Date: 12/28/04

TOTAL PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results µg/kg
Total PCBs	17	U
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	62	%
Decachlorobiphenyl	57	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

COMMENTS: Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.
Results are expressed on a dry weight basis.



Ms. Janice McIntosh
Tetra Tech FW, Inc.
133 Federal Street 6th Floor
Boston MA 02110

December 30, 2004

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NAVSTA-Sand Blast Grit Removal

Project Number:

Field Sample ID: SHIPYARD-BASE1

Lab Sample ID: 53315-5

Matrix: Solid

Percent Solid: 86

Dilution Factor: 1.1

Collection Date: 12/22/04

Lab Receipt Date: 12/24/04

Extraction Date: 12/28/04

Analysis Date: 12/28/04

TOTAL PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
Total PCBs	17	50
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	72	%
Decachlorobiphenyl	61	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.

COMMENTS: Results are expressed on a dry weight basis.

Ms Janice McIntosh
Tetra Tech FW, Inc.
133 Federal Street 6th Floor
Boston MA 02110

December 30, 2004

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NAVSTA-Sand Blast Grit Removal

Project Number:

Field Sample ID: SHIPYARD-BASE2

Lab Sample ID: 53315-6
Matrix: Solid
Percent Solid: 89
Dilution Factor: 1.1
Collection Date: 12/22/04
Lab Receipt Date: 12/24/04
Extraction Date: 12/28/04
Analysis Date: 12/28/04

TOTAL PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
Total PCBs	17	34
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	70 %	
Decachlorobiphenyl	58 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.

COMMENTS: Results are expressed on a dry weight basis.

Ms. Janice McIntosh
Tetra Tech FW, Inc.
133 Federal Street 6th Floor
Boston MA 02110

December 30, 2004

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NAVSTA-Sand Blast Grit Removal

Project Number:

Field Sample ID: SHIPYARD-BASE3

Lab Sample ID: 53315-7

Matrix: Solid

Percent Solid: 90

Dilution Factor: 1.1

Collection Date: 12/22/04

Lab Receipt Date: 12/24/04

Extraction Date: 12/28/04

Analysis Date: 12/28/04

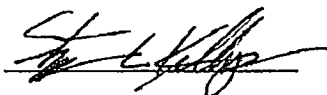
TOTAL PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
Total PCBs	17	266
Surrogate Standard Recovery		
2,4,5,6-Tetrachloro-m-xylene	67	%
Decachlorobiphenyl	58	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.

COMMENTS: Results are expressed on a dry weight basis.



Ms. Janice McIntosh
Tetra Tech FW, Inc.
133 Federal Street 6th Floor
Boston MA 02110

December 30, 2004

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: NAVSTA-Sand Blast Grit Removal

Project Number:

Field Sample ID: SHIPYARD-BASE4

Lab Sample ID: 53315-8
Matrix: Solid
Percent Solid: 79
Dilution Factor: 1.2
Collection Date: 12/22/04
Lab Receipt Date: 12/24/04
Extraction Date: 12/28/04
Analysis Date: 12/28/04

TOTAL PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
Total PCBs	18	U
<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	66 %	
Decachlorobiphenyl	58 %	
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545

COMMENTS: Results are expressed on a dry weight basis

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

L-SHIPYARD-BASE3A

Lab Name: STL BURLINGTON Contract: 25000
Lab Code: STLVT Case No.: 25000 SAS No.: _____ SDG No.: 53401A
Matrix (soil/water): SOIL Lab Sample ID: 604984
Level (low/med): LOW Date Received: 01/17/05
% Solids: 83.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	23.2		E	P

Color Before: _____ . Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____
Comments: _____

USEPA - CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

L-SHIPYARD-BASE3B

Lab Name: STL BURLINGTON Contract: 25000
Lab Code: STLVT Case No.: 25000 SAS No.: _____ SDG No.: 53401A
Matrix (soil/water): SOIL Lab Sample ID: 604985
Level (low/med): LOW Date Received: 01/17/05
% Solids: 89.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	8.2		E	P

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____
Comments: _____



195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

Ms. Janice McIntosh
Tetra Tech FW, Inc.
133 Federal Street 6th Floor
Boston MA 02110

Report Number: 53495

Revision: Rev. 0

Re: NAVSTA-Sand Blast Grit Removal

CTO 0085

Enclosed are the results of the analyses on your sample(s). Samples were received on 04 February 2005 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

<u>Lab Number</u>	<u>Sample Date</u>	<u>Station Location</u>	<u>Analysis</u>	<u>Comments</u>
53495-1	02/03/05	SHIPYARD-WASTECHAR1	Electronic Data Deliverable	
	02/03/05	SHIPYARD-WASTECHAR1	TCLP RCRA Metals	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature

Stephen L. Knollmeyer
Stephen L. Knollmeyer Lab. Director

Date

02/08/05

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USEPA-CLP FORMS
-1-
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
SHIPYARDWASTECHARI

Lab Name: STL BURLINGTON Contract: 25000
Lab Code: STLVT Case No.: 25000 SAS No.: _____ SDG No.: 53495
Matrix (soil/water): TCLP EXT Lab Sample ID: 607087
Level (low/med): LOW Date Received: 2/4/2005
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-39-3	Barium	459			P
7440-47-3	Chromium	7.6	B		P
7439-92-1	Lead	162			P

Color Before: colorless Clarity Before: clear Texture: _____
Color After: colorless Clarity After: clear Artifacts: _____
Comments: _____

Appendix C

Bill of Lading and Weight Tickets

UNIFORM STRAIGHT BILL OF LADING Original—Not Negotiable—Domestic

Shipper's #

2/15/05

Carrier

Agent's No.

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

at Naval Station Newport

from 1

Simonpietri Drive

Newport, RI 02841

The property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown) marked, consigned and destined as shown below, which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own railroad, water line, highway route or routes, or within the territory of its highway operations, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions on back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

(Mail or street address of consignee—For purposes of notification only)

Consigned to Aggregate Recycling Corp.

Destination Dow Highway Eliot State of ME Zip Code 03903 County of York

Routing Delivering Global Carrier Remediation Sves Vehicle or Car Initial RG No.

Collect On Delivery

\$ and remit to:

C. O. D. charge to be paid by

Shipper ☐
Consignee ☐

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statements:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges

(Signature of Consignor)

If charges are to be prepaid, write or stamp here, "TO BE PREPAID."

Received \$ to apply to prepayment of the charges on the property described hereon

Agent or Cashier

Per (the signature here acknowledges only the amount prepaid)

Charges Advanced

\$

No. Packages	Description of Articles, Special Marks, and Exceptions	Weight (Sub to Car)	Class or Rate	Check Column
1/10	Non RCRA / Non DOT Material (sand blast grit) C75-012 ARC# 24760 2101 Tons	35,000	1/BS	

If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight." NOTE—Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

per

Shipper, Per

NAVSTA NPT

Agent, Per

Permanent post-office address of shipper,

(This Bill of Lading is to be signed by the shipper and agent of the carrier issuing same)

Bill of Lading

Aggregate Recycling Corporation
PO Box 352
106 Dow Highway
Elliot, Maine 03903

(207) 439-5584

Ticket No : 24760
Date : 2/15/05

Customer: 25-02-06
NAVEL STATION NEWPORT
SIMON PIETRIE DRIVE
NEWPORT, R I 02841

Order No :

Loads : 0
Miles : 0
Tons : 0.00

QTS AG
GRIT SAND BLAST GRIT

Gross : 82920 Scale 1 In 10:32:00AM
Tare : 40900 Scale 1 In 10:50:20AM
Net : 42020 1b
21:010

Weigh Master: ROD

Driver:

Remarks:

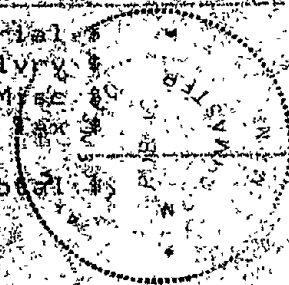
Material:

Delivery:

Misc:

Tax:

Total:



Shipper's #

2/16/05

Agent's No. _____

at Naval Station Newport from 1 Simonpietri Drive Newport, RI 02841

The property described below, in apartment good order, except as noted (contents and condition of contents of packages unknown) machine, consigned and destined as shown below, which, said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry, to cause to be delivered at said destination, if or as it may be required, under its own or the highway route or route or routes within the territory of its highway operations, to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, hereby consented, including the conditions on back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

(Mail or street address of consignee - For purposes of notification only.)

Consigned to Aggregate Recycling Corp.

Destination Dow Highway Eliot State of ME Zip Code 03903 County of _____
Street City

Routing _____ Carrier Remediation Svcs or Car Initial RG No _____

Collect On Delivery.

\$ _____ and remit to:

C. O. D. charge to be paid by	Shipper	<input type="checkbox"/>
	Consignee	<input type="checkbox"/>

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statements:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor.)

100

Received \$ _____ to apply to
prepayment of the charges on the
property described hereon.

Agent or Cashier

Per _____
(the signature here acknowledges only
the amount prepaid)

Charges Advanced:

"If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight." NOTE--Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is thereby specifically stated by the shipper to be not exceeding

[Handwritten signature]

Shipper's Per. PAVSTAN

Permanent post-office address of shipper

Agent must detach and retain this Shipping Order
and must sign the Original Bill of Lading.

¹⁷ (This Bill of Lading is to be signed by the shipper and agent of the carrier issuing same.)

Aggregate Recycling Corporation
PO Box 363
106 Dow Highway
Elliot, Maine 03903

(207) 439-5584

Ticket No : 24852
Date : 2/17/05

Customer: 25-02-06
NAVEL STATION NEWPORT
SIMON PIETRIE DRIVE
NEWPORT, R I 02841

Order No :

Loads : 0
Miles : 0
Tons : 0.00

BTS
GRIT SAND BLAST GRIT

Gross : 72100 Scale 1 In 9:53:36AM
Tare : 40900 Scale 1 In 10:09:28AM

Net : 31200 16
15.600

Weight Master: ROD

Driver:

Remarks:

Material
Delivery
Misc
Tax
Total

